

Title (en)

Water-based, solvent-free or low voc, two-component polyurethane coatings

Title (de)

Wässrige lösungsmittelfreie oder einen geringen Anteil an flüchtigen organischen Verbindungen aufweisende Zwei-Komponenten-Polyurethan-Beschichtungen

Title (fr)

Revêtements de polyuréthane à deux composants à base d'eau exempts de solvant ou à faible teneur en composé organique volatil

Publication

EP 0700945 A1 19960313 (EN)

Application

EP 95114151 A 19950908

Priority

US 30335694 A 19940909

Abstract (en)

A substantially solvent free aqueous two-component coating composition dispersion which, when applied to a substrate, cures to a film having properties of adhesion and bonding which are equal to or superior to films obtained from conventional solvent-based two-component polyurethane or epoxy systems. The first component is a combined aqueous polyol phase and an amine phase. The polyol phase a member consisting of an acid containing polyol or a blend of polyols containing an acid containing polyol such that the average hydroxyl functionality of the polyol phase is at least 1.5 and has an acid number of between about 15 and 200. The amine phase is an amine or blend of amines containing active hydrogens reactive with NCO groups such that the average active hydrogen functionality is at least 1.5. The amine phase is present in a quantity sufficient to substantially neutralize the acid containing polyols. The second component is a member selected from the group consisting of an aliphatic polyisocyanate, a cycloaliphatic polyisocyanate and an aromatic polyisocyanate and adducts and mixtures thereof. The ratio between the isocyanate equivalents and the sum of the active hydrogen equivalents of the polyols and amines is at least 0.5:1 and is preferably at least 1.1:1. The preferential reaction of the isocyanate groups with the active hydrogen moieties from the polyols and amines results in both linear and crosslinking polymerization.

IPC 1-7

C08G 18/08; **C08G 18/65**; **C08G 18/28**; **C08G 18/42**; **C08G 18/62**; **C08G 18/48**; **C09D 175/12**

IPC 8 full level

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CPC (source: EP KR US)

C08G 18/0823 (2013.01 - EP US); **C08G 18/2865** (2013.01 - EP US); **C08G 18/4018** (2013.01 - EP US); **C08G 18/4202** (2013.01 - EP US); **C08G 18/4263** (2013.01 - EP US); **C08G 18/4887** (2013.01 - EP US); **C08G 18/6254** (2013.01 - EP US); **C08G 18/6523** (2013.01 - EP US); **C08G 18/6607** (2013.01 - EP US); **C08G 18/6611** (2013.01 - EP US); **C09D 175/04** (2013.01 - KR); **C09D 175/06** (2013.01 - EP US); **C09D 175/12** (2013.01 - EP US)

Citation (applicant)

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